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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,999	09/30/2003	Jessica L. Voss-Kehl	58227US002	5245

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EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,999

Applicant(s)

VOSS-KEHL ET AL.

Examiner

Christopher M. Keehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-30, 32-41, 43-49, 51 and 53-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-41, 43-45 and 59 is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 7-9, 14, 16-18, 20-25 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/6/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102/103

Claims 1-5, 10-13, 15, 19 and 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matsuda et al. (6,586,104 B2). Regarding claims 1-5, 10-12, 13, 15, and 19, Matsuda et al. disclose a composition comprising a mixture of surface-modified nanoparticles in the size included in applicant's claimed range (col.3, lines 36-53) inorganic nanoparticles present in an amount included in applicant's claimed range (col.6, lines 12-15) dispersed in polymethylsilsesquioxane (col.4, lines 20-34) in an amount included in applicant's claimed range (col.6, lines 16-19), a solvent (col.6, line 11), and an adhesion promoter or flexibilizer (col.6, lines 26-29). Matsuda et al. do not appear to specifically disclose the instantly claimed viscosity limitations. However, it appears these viscosities are inherently disclosed by Matsuda et al. because the materials of Matsuda et al. are the same as that as claimed by applicant, absent evidence to the contrary. If not inherent, then it would have been obvious to one of ordinary skill in the art at the time the invention was made for the composition of Matsuda et al. to have an at least similar viscosity because the molecular weights of the silsesquioxanes of Matsuda et al. (col.5, lines 53-60) are included in the range of molecular weights preferred by applicant (specification, page 16, lines 13-23).

Regarding claim 26, Matsuda et al. disclose a solvent as claimed (col.5, lines 21-35).

Claim Rejections - 35 USC § 103

Claims 27, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanmaele et al. (2004/0163570 A1) in view of Yamada et al. (6,787,289 B2). Vanmaele et al., as applied above, are as set forth and incorporated herein. The examiner is relying on the provisional application filing date, which fully supports the above cited application. The provisional application, 60/455,606, can be obtained from Public Pair at the USPTO internet site (www.uspto.gov). Regarding claims 27, 28 and 30, Vanmaele et al. disclose a method of printing and a composition thereof comprising a mixture of inorganic nanoparticles present in an amount included in applicant's claimed range (sections 0087 and 0093) dispersed in polymethylsilsesquioxane (page 6, Table 1, formation I.10 and section 0159) in an amount included in applicant's claimed range (section 0159), a solvent (section 0159), applying the composition onto a substrate by a digital printing technique, more specifically ink jet printing (Abstract), drying thereafter (section 0145), and using the composition in displays (section 0151). Yamada et al. disclose a polysilsesquioxane composition (col.20, lines 11-29) used in touch panels (col.34, line 50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the composition as taught by Vanmaele et al. in the touch panel of Yamada et al. because Yamada et al.

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teach that using the composition in a touch panel produces a material with improved optical properties, resulting in a higher quality product.

Claims 27, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (6,586,104 B2) in view of Yamada et al. (6,787,289 B2). Regarding claims 27, 29, and 30, Matsuda et al. disclose a composition comprising a mixture of inorganic nanoparticles present in an amount included in applicant's claimed range (col.6, lines 12-15) dispersed in polymethylsilsesquioxane (col.4, lines 20-34) in an amount included in applicant's claimed range (col.6, lines 16-19), a solvent (col.6, line 11), printing the composition onto a substrate (col.10, lines 1-5) by a digital printing technique, more specifically aerosol printing (col.6, lines 55-61), and using the composition in a liquid crystal display (col.3, lines 3-16). Matsuda et al. do not appear to specifically disclose using the composition in a touch panel. Yamada et al. disclose a polysilsesquioxane composition (col.20, lines 11-29) used in touch panels (col.34, line 50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the composition as taught by Matsuda et al. in the touch panel of Yamada et al. because Yamada et al. teach that using the composition in a touch panel produces a material with improved optical properties, resulting in a higher quality product.

Claims 46, 47, 49, 51, 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanmaele et al. (2004/0163570 A1) in view of Matsuda et al.

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(6,586,104 B2). Vanmaele et al. and Matsuda et al. are as set forth and incorporated herein. Vanmaele et al. disclose providing a substrate, ink jetting a composition by containing polyorganosilsesquioxane and nanoparticles onto the substrate (as set forth above), and curing the composition at a temperature below 150°C (section 0145).

Vanmaele et al. do not appear to specifically disclose surface-modified particles.

Matsuda et al. disclose a mixture of surface-modified nanoparticles as claimed (col.3, lines 36-53) dispersed in polymethylsilsesquioxane (col.4, lines 20-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used surface-treated particles as taught by Matsuda et al. in the composition of Vanmaele et al. because Matsuda et al. teach that using surface-treated particles as claimed produces enhanced adhesion and applicability to the substrate surface, resulting in a higher quality product.

Claims 46 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakayama et al. (4,894,254) in view of Matsuda et al. (6,586,104 B2). Nakayama et al. disclose providing a substrate, and screen printing a composition containing polyorganosilsesquioxane onto the substrate, and curing the composition at a temperature below 150°C (col.3, lines 48-55). Nakayama et al. do not appear to specifically disclose surface-modified particles. Matsuda et al. disclose a mixture of surface-modified nanoparticles as claimed (col.3, lines 36-53) dispersed in polymethylsilsesquioxane (col.4, lines 20-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used surface-

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treated particles as taught by Matsuda et al. in the composition of Nakayama et al. because Matsuda et al. teach that using surface-treated particles as claimed produces enhanced adhesion and applicability to the substrate surface, resulting in a higher quality product.

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (6,586,104 B2) in view of Kobayashi et al. (2004/0050297 A1). Matsuda et al., as applied above, are as set forth and incorporated herein. Matsuda et al. disclose additives for improving leveling and wetting properties (co.6, lines 26-29). Matsuda et al. do not appear to specifically disclose a silane as claimed. Kobayashi et al. disclose a polysilsesquioxane (section 0006) comprising a silane as claimed (section 0009). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the silane as taught by Kobayashi et al. in the composition of Matsuda et al. because Kobayashi et al. teach that adding a silane as claimed produces improved adhesion (wetting), resulting in a higher quality product.

Response to Arguments

Applicant's arguments filed 5/18/05 have been fully considered but they are not persuasive. In response to the last office action, applicant contends that the claims have been amended to include allowable subject matter. However, this is not clear. Claim 1 has been amended to incorporate the subject matter of claim 6, which was rejected over Matsuda et al. (6,586,104 B2). Therefore, this rejection still stands.

Allowable Subject Matter

Claims 7-9, 14, 16-18, 20-25, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 32-41, 43-45, and 56-59 are allowed. The prior art of record does not appear to teach or disclose the claimed touch activated user input device with the resistive layer and active layer, wherein polysilsesquioxane is coated over at least a portion of the resistive layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (571) 272-1087. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Keehan

July 13, 2005

CJ
DAVID J. BUTTNER
PRIMARY EXAMINER

David Buttner